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► **To cite this version:**

Charles Pioger, Julien Dartus, Harold Common, Patrick Devos, Emilie Bilichtin, et al.. Publication rate of studies presented at the French Arthroscopic Society Meeting in 2014.. Orthopaedics & Traumatology: Surgery & Research, 2020, Orthopaedics & Traumatology: Surgery & Research, 106 (8), pp.S189-S194. 10.1016/j.otsr.2020.08.003 . hal-04547787

HAL Id: hal-04547787

<https://hal.univ-lille.fr/hal-04547787v1>

Submitted on 16 Apr 2024

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Original article

Publication Rate of Studies Presented at the French Arthroscopy Society Meeting in 2014

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Abstract

Introduction

Publication rates for studies reported at French Arthroscopy Society (Société Francophone d'Arthroscopie, SFA) meetings are not known. A comprehensive search of podium presentations to the 2014 SFA meeting was performed, assessing: 1) publication rate for meeting abstracts, and 2) bibliometric parameters including journal Impact Factor.

Hypothesis

The full-text publication rate for abstracts accepted for the 2014 French Arthroscopy Society (SFA) meeting was around 47.1%: i.e., the rate reported for the 2013 meeting of the French Society of Orthopedic Surgery and Traumatology (SoFCOT).

Material and Methods

Bibliometric analysis of all abstracts accepted for the 2014 SFA annual meeting was undertaken by the Junior French Arthroscopy Society (SFA Junior), who collated the podium presentations. Reported studies were retrospective in 43 cases (54%) and prospective in 36 (46%). They consisted in clinical studies in 52/79 cases (66%), experimental studies in 4 (5%), cadaver or animal studies in 13 (16.5%), epidemiological studies in 8 (10%), a case report in 1 (1.2%) and a literature review in 1 (1.2%). Thirty-two (40.5%) concerned the shoulder and 31 (39%) the knee. Publication was checked on systematic PubMed-Medline search of authors' names. Articles found on PubMed-Medline were downloaded into the SIGAPS scientific publication search, management and analysis system database. Journal impact factor and SIGAPS category (A to E) were obtained, as were number of citations and h-index.

This was a descriptive study, assessing numbers; results were reported as number and percentage.

Results

Overall publication rate was 31/79 (39.2%): 20/31 clinical studies (64.5%), 6 cadaver studies (19.4%), 3 epidemiology studies (9.7%), 1 experimental study (3.2%) and 1 literature review (3.2%). Mean 2014 SFA meeting-to-publication time was 18.7 months [range, -2 to 60 months]. Journal SIGAPS categories were A for 4 articles (13.3%), B for 13 (43.3%), C for 3 (10%), D for 9 (30%), with no E category articles but 1 article (3.3%) without SIGAPS category.

Conclusion

The publication rate for abstracts accepted for report to the 2014 SFA annual meeting was lower than for the 2013 SoFCOT meeting. The high level of the journals in question testified to the quality of the studies reported at the SFA meeting.

Level of evidence: IV, retrospective study

Key-words: presentation, meeting, SFA, arthroscopy, bibliometrics

1. Introduction

Evidence-based medicine is demanding [1], requiring constant progressive justification of practices by scientific analysis of results. International meetings give researchers the opportunity to air their findings and also provide a stage for scientific debate within a diverse community of expert or younger practitioners. Congress presentation is usually the first step toward publication, after selection by the scientific committee based simply on the author's abstract.

Peer-reviewed publication in a journal indexed in the PubMed-Medline database is of greater scientific value [2]. The prerequisites are stricter, with peer-review and editorial guidelines specific to each journal. The various stages of review and the number and quality of the reviewers contribute to the quality of the process.

The French Arthroscopy Society (SFA) is the second largest orthopedic surgery society in France in terms of numbers. The annual meeting is a major outlet for research in arthroscopy, with international scope afforded by partnerships with foreign societies and experts from all over the world [3]. The publication rate of studies presented at a meeting is the best indicator of the meeting's scientific quality and importance.

Many scientific societies have reported publication rates for podium presentations and e-poster made to their meetings, and assessed their quality [4–6], but this has not been done for the SFA. We therefore conducted a retrospective study of the 2014 SFA meeting, to assess: 1) the rate of publication of presented abstracts, and 2) bibliometric parameters including the Impact Factor of the journals in question. The study hypothesis was that the full-text publication rate of abstracts accepted for the 2014 French Arthroscopy Society (SFA) meeting was around 47.1%: i.e., the rate reported for the 2013 French Society of Orthopedic Surgery and Traumatology (SoFCOT) meeting.

2. Material and methods

2.1 Material

A bibliometric analysis of all abstracts accepted for the 2014 SFA meeting was performed by the Junior French Arthroscopy Society (SFA Junior), collating all podium presentations. For abstracts presented to the SoFCOT, Erivan et al. [6] found intervals of -2.5 to +6.1 years between abstract acceptance and PubMed-Medline indexing of the article; we therefore selected the 2014 SFA meeting, to have 6 years' follow-up.

Seventy-nine abstracts were accepted for the 2014 SFA meeting. Seventy (89%) were in orthopedics and 9 (11%) in traumatology; 75 (95%) concerned adults and 4 (5%) pediatric patients. Mean number of authors was 4.2 ± 2.06 [range, 1-9]. Seventy-two (91%) were submitted by French authors, the other countries being Italy (2 abstracts: 2.5%), and Luxembourg, Switzerland, Serbia, Croatia and the UK, with 1 each (1.2%). Seventy-five (95%) concerned single-center and 4 (5%) multicenter studies. Studies were clinical in 52 cases (66%), experimental in 4 (5%), cadaver or animal in 13 (16.5%), and epidemiological in 8 (10%), with 1 case report (1.2%) and 1 literature review (1.2%). Studies were retrospective in 43 cases (54%) and prospective in 36 (46%). The level of evidence was 2 in 8 cases (10%), 3 in 16 (20%), 4 in 46 (58%) and 5 in 8 (10%).

Regions were the shoulder in 32 cases (40.5%), knee in 31 (39%), elbow in 5 (6.3%), ankle in 4 (5%), wrist in 3 (3.8%), hand in 2 (2.4%), and forearm and foot in 1 case each (1.2%).

2.2 Assessment

Based on the 2014 SFA abstracts list, 6 orthopedic surgery residents performed a systematic PubMed-Medline search for published articles, employing the usual methodology for this kind of analysis. First and last authors' names, article title and keywords were used to locate abstracts resulting in publication, despite any change in title, to ensure that all such abstracts

were taken into account. Journal name and Impact Factor, publication date and relevant joint were recorded on Microsoft Excel 2016 (Microsoft, Redmond, WA, USA). Presentation-to-publication interval was calculated in months.

Retrieved articles were checked against the meeting abstracts. Study topic, number of authors, geographic origin of the main author (in terms of supplied address), multi- or single-center and prospective or retrospective design, type of study and level of evidence were recorded. Each article had its DOI (Digital Object Identifier: an international ID common to all databases) and PMID (PubMed ID: specific to PubMed).

Articles found in PubMed-Medline were downloaded into the SIGAPS scientific publication search, management and analysis system database. Journal impact factor and SIGAPS category (A, B, C, D, E, NC (no categorization)) were obtained. PMID was then used to retrieve articles in the Web of Science (WoS) multidisciplinary database of Clarivate Analytics (Philadelphia, PA, USA), to determine number of citations. In these ways, we calculated, for the whole corpus, total citations number (with and without self-citations), mean citations number per article, and h-index (indicator of a given author's impact, taking account of number of publications and of citations [7,8]). Analyses were performed by the Lille bibliometrics platform, Lillometrics (<https://lillometrics.univ-lille.fr/>).

2.3 Statistics

This was a descriptive study, assessing numbers. Results were reported as numbers and percentages. No comparative analysis was made.

3. Results

Overall publication rate was 39.2%: 31 publications for 79 abstracts. These comprised 20 clinical studies (64.5%), 6 cadaver studies (19.4%), 3 epidemiological studies (9.7%), 1 experimental study (3.2%) and 1 literature review (3.2%). The case report was not published.

There were no level-1 studies, but 9.7% level-2 (n = 3), 29% level-3 (n = 9), 51.6% level-4 (n = 16) and 9.7% level-5 (n = 3), for publication rates of respectively 37.5%, 56.2%, 35.6% and 37.5% (Figure 1).

Fifteen studies were prospective (48.4%) and 11 retrospective (35.5%), with publication rates of respectively 41.7% (15 publications for 36 abstracts) and 57.9% (11 for 19). Publication rate was higher for randomized than non-randomized studies: 57.1% versus 38.2%.

In terms of anatomic region, 17 publications concerned the shoulder (54.8%), 11 the knee (35.5%), 2 the ankle (6.5 %) and 1 the elbow (3.2%) (Figure 2). Publication rates per joint were 53.1% for the shoulder, 35.5% for the knee, 100% for the ankle and 20% for the elbow.

Mean 2014 SFA meeting-to-publication interval was 18.7 months [range, -2 to 60 months]. Figure 3 shows publication numbers and rates over time. Articles were published in 9 journals: predominantly Orthopaedics and Traumatology: Surgery and Research (OTSR) (29%) and Knee Surgery Sports Traumatology Arthroscopy (KSSTA) (22.6%). Figure 4 shows number of publications per journal. The mean impact factor of the journals was 2.7 ± 1.27 [1.4 – 6.7].

Journal SIGAPS categories comprised: A for 4 articles (13.3%), B for 13 (43.3%), C for 3 (10%), D for 9 (30%), none in category E, and 1 article (3.3%) uncategorized. Mean citation number per article was 10.8 ± 11.9 [0 - 53].

Mean number of authors was 5.3 ± 1.5 [2 - 8]. The meeting speaker was the first author in 93.5% of cases and second author in 6.5%. There were a mean 1.3 ± 2.3 [-4 to +7] more authors for the articles than for the podium presentations (figure 5).

4. Discussion

The present study analyzed publication rates for podium presentations to the 2014 French Arthroscopy Society (SFA) meeting, at 6 years of follow-up. Thirty-one of the 79 presentations (39.2%) were published in a peer-reviewed journal, mainly with SIGAPS categories A or B. This rate was lower than that reported by Erivan et al. [6] at 6 years follow-up after the 2013 SoFCOT meeting, and thus did not confirm the study hypothesis.

In the study by Erivan et al., 179 of the 503 accepted abstracts and e-posters were published (35.6%); the rate was 47.1% (139/295) for podium presentations alone [6]. These results for the main French orthopedic meeting were within the average range of many international studies in orthopedics-traumatology, reporting 26.6% to 72.8% publication rates [4,5,9–15]. In terms of international arthroscopy meetings, the present rate was lower than those recently reported for the American Orthopaedic Society for Sports Medicine (AOSSM), Arthroscopy Association of North America (AANA) and European Society of Sports Traumatology, Knee Surgery and Arthroscopy (ESSKA) meetings [5,13–15], where rates of publication in indexed journals ranged from 49% to 73.3%, taking podium presentations and e-posters together. The AOSSM meeting had the highest rate, at 73.3% [14], followed by the AANA [15] and the ESSKA [13]. Kay et al. [13] reported a 55% rate for podium presentations in the 2008 and 2010 ESSKA meetings. The difference from the present findings may partly be due to the reputation and impact of American journals in sports surgery and arthroscopy. The American Journal of Sports Medicine (AJSM) and the journal Arthroscopy are in category A on the SIGAPS system, while the French journal OTSR, which

is the main organ for French orthopedic surgeons [15], is less specialized and is in category D [16–18]. Moreover, AJSM is the official journal of the AOSSM, and the Society required all meeting articles to be submitted in first line to the AJSM [5]. This greatly enhanced the chances of publication: 59.4% of podium presentations were accepted by the AJSM. Likewise, KSSTA is affiliated to the ESSKA, and 24% of meeting abstracts were published; and Arthroscopy Journal is the official journal of the AANA, and 30% of meeting abstracts were published. No such arrangement with a high impact-factor journal applied in the 2014 SFA meeting.

The present study confirmed that publication rates are still well below 100%. Practitioners need to be vigilant in interpreting presentations and e-posters and their suitability in guiding clinical practice [19]. Several studies suggested that the discussions that follow podium presentations can help authors improve their manuscript ahead of submission [5,20]. Bandhari et al. [21] found considerable differences between the original presentation and the final article.

In recent years, analysis of publication rates in medical research has suggested several means of improvement. Some authors stressed the need for stricter criteria, avoiding reporting preliminary data [22,23]. As most unpublished research is never actually submitted for publication [24,25], Weber et al. [20] stressed the role of specialty societies in encouraging researchers in the publication process, whether their study is accepted or not; authors submitted to no more than 2 journals on average before giving up.

As seen above, associating the meeting to a high impact-factor journal could enhance publication. Another important finding of the present study and in the literature was that level of evidence did not impact publication rate; most level-4 studies were published [22,26]. This was in agreement with recent bibliometric studies [13,15] which reported no correlation between publication and level of evidence in presentations to the 2008 and 2010 ESSKA

meetings, although these results were likely biased by the small number of level 1 or 2 studies among the abstracts accepted for the meeting. Conversely, Voleti et al. [27] reported that presentations with high level of evidence (1 or 2) were 3 times more likely to be published, and in a significantly shorter time.

The present study was the first to assess publication rates for studies presented to an SFA annual meeting, but showed some limitations. The first was inherent to the study design: the methodology was liable to underestimate publication rates when the title of the podium presentation did not match that of the published article. However, systematic search was performed using the names of the first and last authors, to track down any publication associated with the presentation. Publications not indexed on PubMed may also have led to underestimation. Nevertheless, the search criteria were those classically implemented, which moreover enabled comparative analysis. The follow-up period was limited to 6 years, and some articles may yet be published later; nevertheless, it has been shown that most published presentations appear within 3 years [15]. The small number of presentations in question (n = 79) precluded comparative statistical analysis. And a final limitation was the absence of e-posters: these data were not available for the 2014 SFA meeting, and no comparison could thus be made with podium presentations and the corresponding literature data.

5. Conclusion

The publications rate at 6 years for abstracts accepted for presentation to the 2014 SFA meeting was lower than in previous French bibliometric reports. However, the high levels of the journals in which articles were published testify to the high quality of the meeting reports.

Acknowledgments: The authors thank the French Arthroscopy Society (SFA) for providing the 2014 meeting abstracts. They also thank Henri Migaud, Editor in Chief of Orthopaedics & Traumatology: Surgery & Research (OTSR), for advice in drawing up the article.

Disclosure of interest: The authors have no conflicts of interest to disclose.

Funding: none

Author contributions:

Charles Pioger: article writing and study coordination.

JD, EB, MB: data analysis and help with article writing.

PD: data extraction and analysis.

HC, QB and Corentin Pangaud: help with article writing.

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Figure legends

Figure 1: Publication according to level of evidence.

Figure 2: Distribution according to joint.

Figure 3: Publication numbers and rate around the 2014 SFA meeting.

Figure 4: Distribution by journal (alphabetic order).

Figure 5: Differences in number of authors between presentation and article.

Figure 1 :

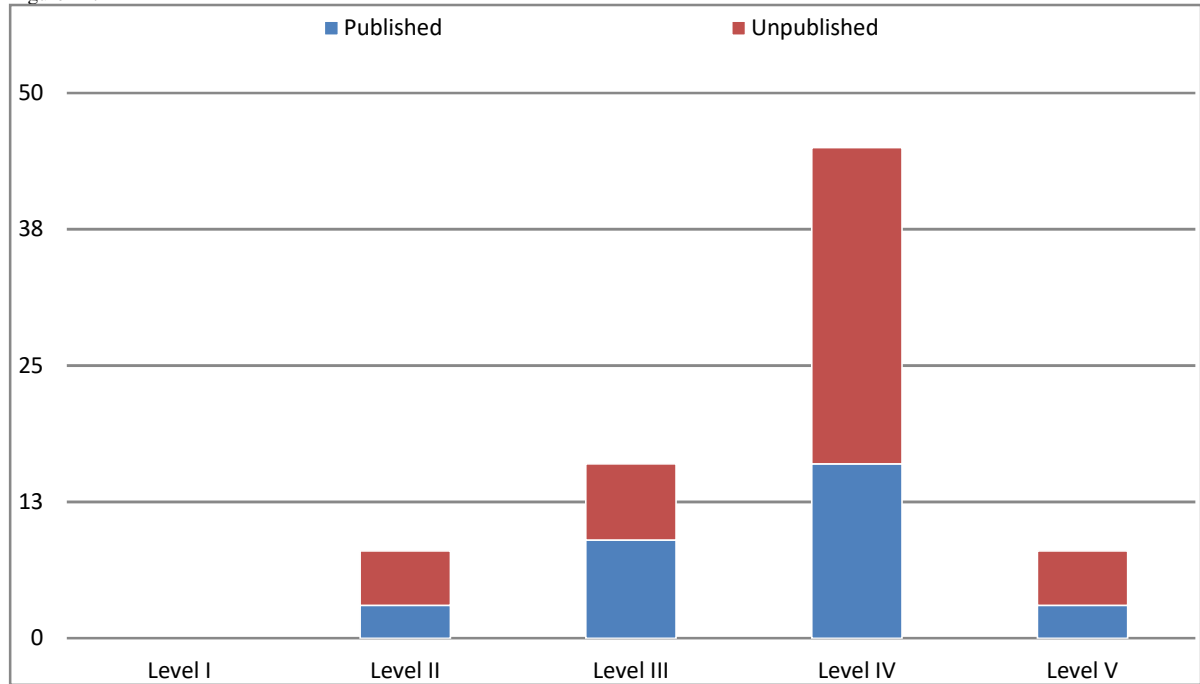


Figure 2 :

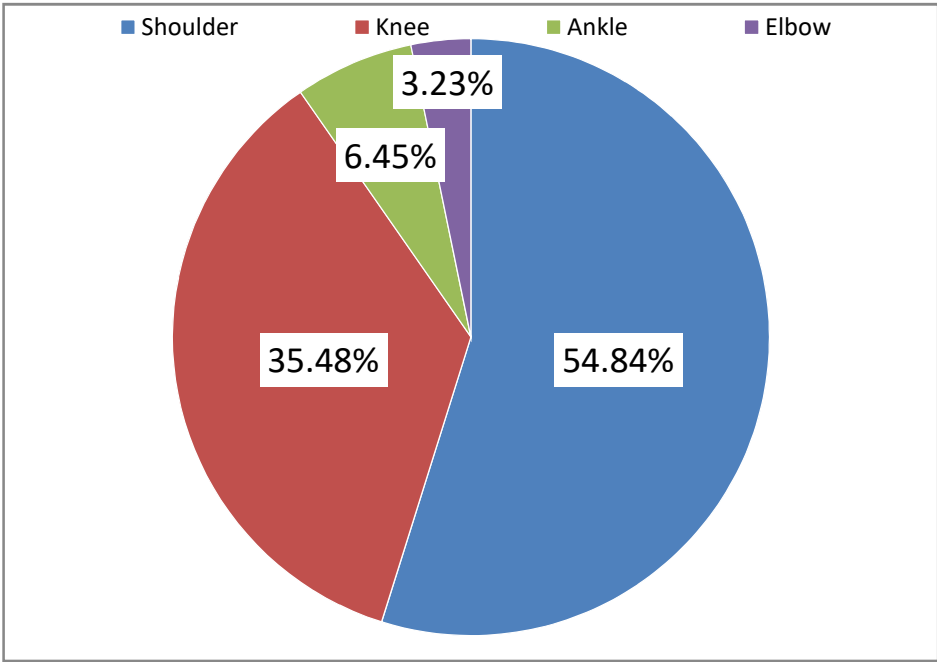


Figure 3 :

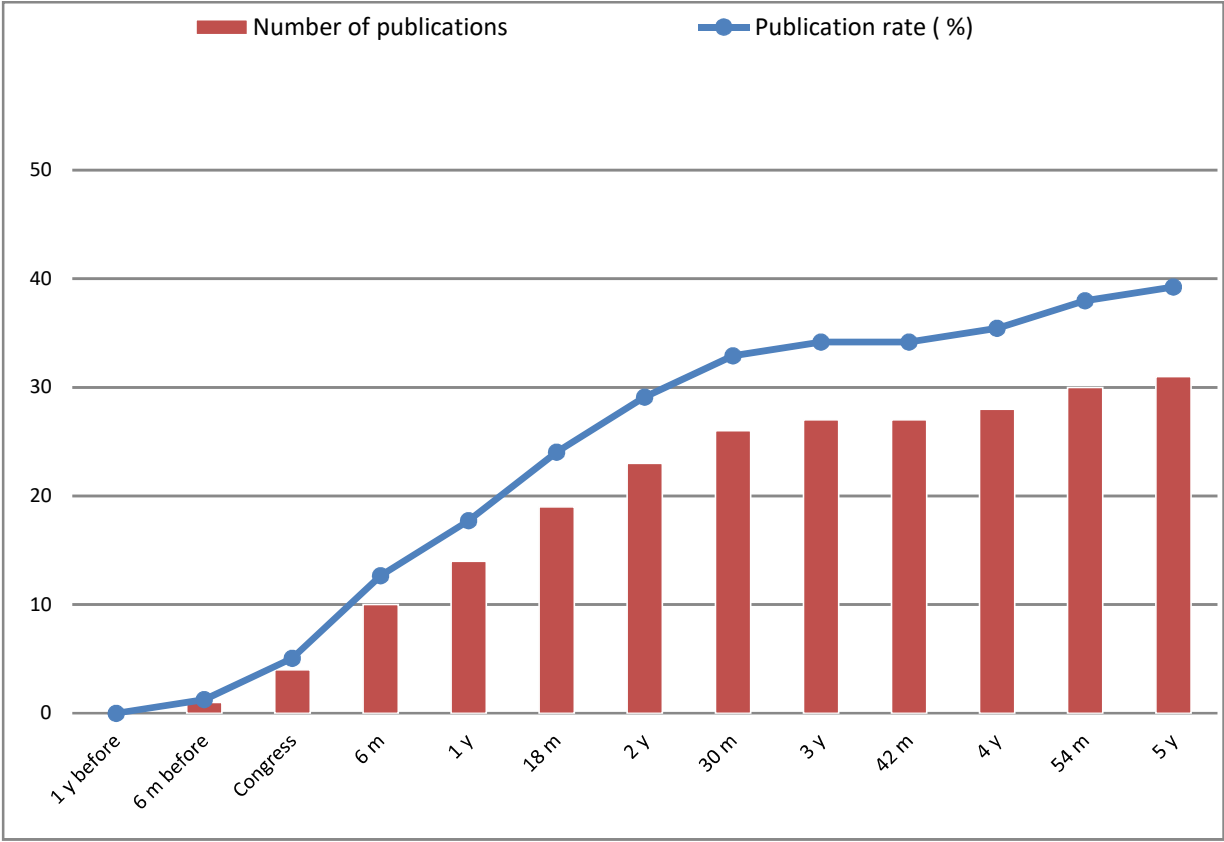


Figure 4

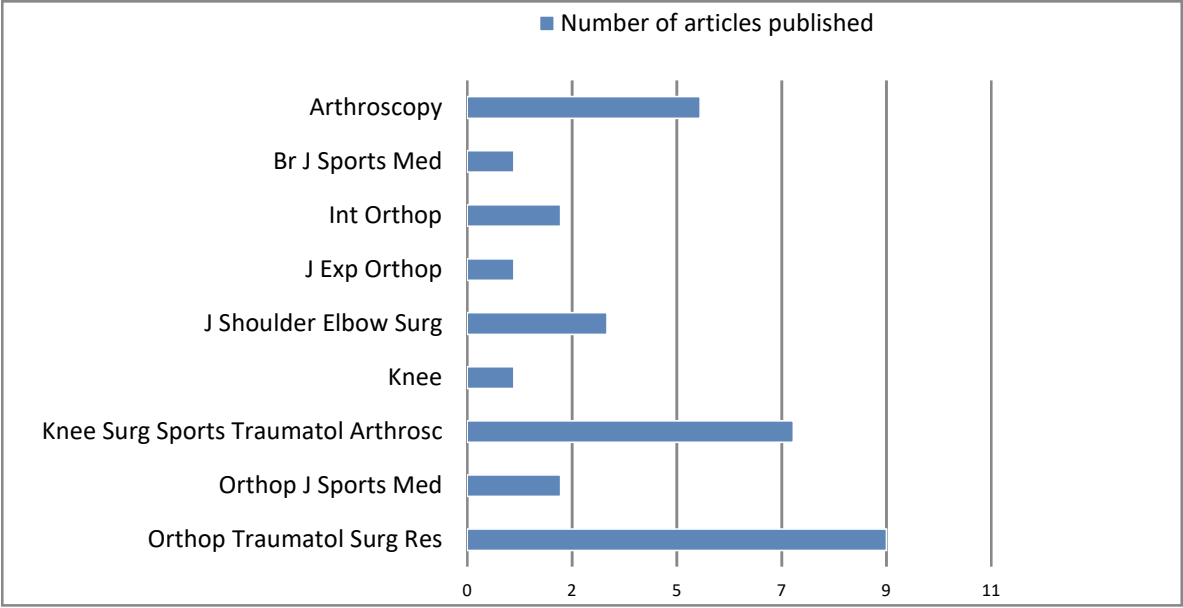


Figure 5 :

